CORRESPONDENCE

Mycoplasma hominis catheter-related infection in a patient with multiple trauma

Mycoplasma hominis is usually found colonizing the genito-urinary tract and occasionally the respiratory tract in varying percentages depending upon the population studied. This micro-organism has been isolated in such contexts as pyelonephritis, pelvic inflammatory disease, post-partum and post-abortion fever, and neonatal infection [1]. *Mycoplasma hominis* has also been isolated in extragenital infections: bacteremia, mediastinitis, at various anatomical sites after surgery and in central nervous system infections, in patients who frequently had some type of immunosuppression [2–4]. We report a case of catheter-related infection and phlebitis due to *M. hominis* in a multiply traumatized patient.

A 26-year-old man was admitted to our hospital with multiple lesions after being hit by an automobile. He suffered cranial injury necessitating intubation and mechanical ventilation; he also suffered multiple fractures of the lower limbs that were treated with endomedullary nails, a right-sided pneumothorax and pleural effusion. A right pleural drain and an urinary catheter were inserted. Three units of packed red cells were given and treatment with cefazolin and gentamicin was started. In the immediate post-operative period the patient developed fever 39.2 °C and leukocytosis of 23 000/mm^3 with 7% band forms. Progressive lung dysfunction and purulent respiratory secretions with appearance of left pleural effusion, phlebitis in the upper right extremity related to peripheral insertion of a venous catheter, and a seroma in the lower left extremity wound were observed. The catheter was removed and the tip was sent for culture along with a sample of the exudate taken at the insertion site. Blood, pleural exudate, respiratory secretion and urine cultures were also performed. Empirical treatment with ciprofloxacin and cloxacilin was started; on the third day, as fever persisted, this treatment was discontinued and imipenem was started. The patient improved and fever and leukocytosis disappeared. Urine, pleural drainage and blood cultures were negative. *Enterobacter aerogenes* was isolated in the respiratory secretion culture. After 72 h of incubation on blood agar at 37 °C in a 5% CO_2 atmosphere, in the catheter tip and insertion site exudate cultures grew pinpoint, nonhemolytic, unpigmented colonies. Gram staining of these colonies identified no organisms (>100 in the catheter tip culture). A subculture in specific liquid medium (Mycofast, BioMérieux, L'Etoile, France) revealed *Mycoplasma hominis*. A sample of the strain was sent to a reference laboratory for confirmation by solid medium culture and antimicrobial susceptibility studies (these studies proved the organism to be sensitive to tetracycline, doxycycline, ofloxacin and pristinamycin, moderately susceptible to josamycin and resistant to erythromycin). When isolation of *M. hominis* was confirmed, a Mycofast urine culture was ordered and *M. hominis* was also recovered from this source. The patient continued to improve and was discharged with no further complications. Specific treatment for *M. hominis* was deemed unnecessary.

In our literature review, we found one case report of suppurative phlebitis in the area of catheter insertion [3], one case of catheter-related infection [5], and one case of central venous catheter colonization at the site insertion [6]. In the first case that was related to abortion and neither bacteremia nor catheter colonization were documented. The second case was similar to ours in that the patient had multiple trauma, the urinary tract was catheterized, and specific antibiotic therapy proved unnecessary, although *M. hominis* was isolated in blood culture. The third case, which like ours reported isolation of *M. hominis* upon catheter tip culture and at the point of insertion, involved an immunodepressed patient; no mention of genitourinary tract manipulation was made, although the case discussion seems to allow such manipulation to be implicitly ruled out. In this case, *M. hominis* failed to grow in blood cultures, even though a specific medium was used.

The association of multiple trauma and extragenital infection by *M. hominis* is well known, and it has been hypothesized that manipulation of the urinary tract might give rise to bacteremia in carriers of *Mycoplasma* spp. and that, eventually, other tissues would be seeded [3,7,8]. Our patient's evolution suggests that bacteremia, if present, was transitory, and that fever and phlebitis resolved upon removal of the catheter and administration of a beta lactam antibiotic (imipenem) inactive against *Mycoplasma* spp. *M. hominis* may not have grown in blood cultures because bacteremia was transitory or because we used an automated system (VITAL, BioMérieux, L'Etoile, France) in our laboratory without systematic subculture in solid medium, suggesting that the sensitivity of our method for *Mycoplasma* spp. recovery in blood samples is low, probably due to the presence of 0.025% sodium polyanethyl sulphonate (SPS) in the liquid culture medium [9]. Another possibility could be cross-contamination at the intravenous insertion site from the urine.

We believe that infection by *Mycoplasma* spp. should be considered in multiply traumatized patients with manipulation of the genitourinary tract, who develop unexplained fever, particularly if treatment with wide-spectrum antibiotics inactive against those micro-organisms meets with a poor response. Appropriate laboratory procedures for isolating and identifying *Mycoplasma* spp. should be applied [5,6,8].

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